

## **GCMD Ontology Overview (2015-03-26)**

### **What we did**

- Drafted an ontology relating Earth Observation Satellites (NASA and Non-NASA) to their associated Instruments and Sensors.
- Extended the ontology to include related Datasets for NASA Satellites
- Filled in gaps in the ontology through keyword relationships already existing in GCMD database (DIF and Ancillary Descriptions), external taxonomies/ontologies (See References Section), and personal knowledge.

### **Where will it be published?**

- NASA EarthData Wiki: [CMR Systems Engineering Home](#) (For NASA ESDIS ESO Review)
- GCMD KMS RESTful Service for community use (Following NASA ESDIS ESO Review)

### **Next Steps**

- Apply ontology to DIF-9 to DIF-10 translator to auto-populate Platform/Instrument/Sensor in XML hierarchy (For UMM-C Compliance).
- Enhance metadata Quality Assurance (QA) by cross-referencing metadata content with keyword relationships in ontology to identify potential inconsistent/incorrect/missing information.
- Expand ontology to include additional concepts including Science Keywords, Measured Parameters, and non-Earth Observation Satellite platforms.

### **References**

- CEOS Mission, Instruments and Measurements Database online: <http://database.eohandbook.com/>
- Observing Systems Capability Analysis and Review Tool (OSCAR): <http://www.wmo-sat.info/oscar/spacecapabilities>
- NASA Earth missions: <http://science.nasa.gov/earth-science/missions/>

- NSSDC Master Catalog: <http://nssdc.gsfc.nasa.gov/nmc/>  
ESA Earth Observation Missions: <https://earth.esa.int/web/guest/missions/esa-operational-eo-missions/>
- National Remote Sensing Centre Indian Space Research Organisation IRS Satellite Missions: [http://www.nrsc.gov.in/Data\\_Products\\_Services\\_Satellite\\_IRS2.html](http://www.nrsc.gov.in/Data_Products_Services_Satellite_IRS2.html)
- ECHO API output for Sensor

## **Contact**

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